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HEARING

BEFORE THE

COMMISSION ON SECURITY AND COOPERATION IN EUROPE

ONE HUNDREDTH CONGRESS

SECOND SESSION

POLITICS OF POLLUTION IN THE SOVIET UNION AND EASTERN EUROPE (ON THE SECOND ANNIVERSARY OF THE CHERNOBYL DISASTER)

APRIL 26, 1988

Printed for the use of the
Commission on Security and Cooperation in Europe

[CSCE 100-2-31]

U.S. GOVERNMENT PRINTING OFFICE

86-919 WASHINGTON : 1988

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

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PUBLIC HEARING ON THE POLITICS OF POLLUTION IN THE SOVIET UNION AND EASTERN EUROPE (ON THE SECOND ANNIVERSARY OF THE CHERNOBYL DISASTER)

TUESDAY, APRIL 26, 1988

COMMISSION ON SECURITY AND COOPERATION IN EUROPE,
Washington, DC.

The Commission met pursuant to notice, in room 2212, Rayburn House Office Building, Washington, DC, at 2 p.m., Representative Steny H. Hoyer (Chairman) and Senator Dennis DeConcini (Cochairman) presiding.

In attendance from the Commission, Senator Timothy Wirth; also in attendance, Representative Jan Meyers.

Also in attendance: Mary Sue Hafner, deputy staff director and general counsel; Jane S. Fisher, senior staff consultant; and Mike Amitay, hearing coordinator.

STATEMENT OF SENATOR TIMOTHY WIRTH

Senator WIRTH. Ms. Meyers, Congressman Hoyer extends his apologies for being late. He is having a lunch related to CSCE and will be along shortly. Our witnesses have been very kind and generous with their time, and I think we ought to move along.

Our four witnesses this morning: Dr. John Kramer, chair of the political science department at Mary Washington College in Fredericksburg, Virginia; Dr. John Lampe, Secretary of the East European Program at the Smithsonian Institution's Wilson Center; Dr. Charles Ziegler, associate professor of political science at the University of Louisville; and Dr. Barbara Jancar, professor of political science at State University of New York at Brockport. We're delighted to have you all here. We thank you very much. Before going to your testimony, let me ask if you have any opening statement you would like to make?

Representative MEYERS. I have no opening statement. I'm just very pleased to be here today, and I do apologize for my colleagues in the House that I know have been detained at another meeting. So, proceed.

Senator WIRTH. Fine, thank you very much. This issue of the politics of pollution, politics of the environment, I think, is very timely for us all, not only in the United States but in the Soviet Union and Eastern Europe as well. This is an issue that, as just one member of the Commission, I have been particularly interested in.

Only a couple of weeks ago I spent a fascinating afternoon with Mr. F.P. Morgun who is the Chair of the new State Committee on the Preservation of Nature.

Mr. Morgun has just arrived in Moscow from near Kiev where he has been deeply involved in agricultural issues and, I believe, in reform politics. He certainly expresses a view of the importance of this issue in the Soviet Union and the extraordinary pressures that are coming from literally millions of people interested in and concerned about the Soviet Union's environment. That ranges from degradation of the soil to assuring that rivers continue to run in the direction in which they were initially running, to damming projects in the Leningrad area. He would appear to be very much of an advocate of the environment as we have come to know it.

I know that Dr. Ziegler is going to have comments on that subject, as well as other. So why don't we ask all of you to summarize your statements. They will be included in full in the record. We would hope that you could summarize in something in the neighborhood of 5 to 7 minutes, and then we can get into questions and answers.

So why don't we just run in the order in which you were introduced, Dr. Kramer, Dr. Lampe, Dr. Ziegler and Dr. Jancar.

Dr. Kramer.

STATEMENT OF DR. JOHN KRAMER

Dr. KRAMER. Thank you, Senator Wirth and members of the Commission. I have been asked to speak about the nuclear debate which has ensued in Eastern Europe after the explosion at the Chernobyl nuclear power station. I think we're all well aware of the enormous and adverse impact on the environment of Chernobyl, both in Communist Europe as well as other parts of the world.

Perhaps what we're less well aware of is that that accident stimulated a wide ranging debate among both public officials as well as the citizenry at large about the future of the nuclear power industry in the region. The outcome of this debate, I think, is enormously significant; because, as I shall elaborate upon in a moment, I think there are some very, very serious problems with the way in which the governments of Communist Europe are running their nuclear power programs, and it's at least not inconceivable that a future Chernobyl could in fact occur.

I think, as well, this nuclear debate is enormously significant in Communist Europe itself. It seems to me that its very existence there is a manifestation of incipient political pluralism in the region. Regimes in that region, as you well know, have long been hostile, and exhibited an antipathy to any manifestations of public policy dissent. Consequently, the very existence of this vibrant and highly visible movement is something that we should keep our eye on for the future.

Further, many of the dissenters in Communist Europe have directly attacked the nature of Communist European regimes for their alleged inability to run nuclear power programs. I quote in my testimony from a member of the Polish Academy of Sciences who argues that nondemocratic regimes, in general, are inherently incapable of managing safely, nuclear power programs, because of their inherent incapacity for full disclosure of accidents and other kinds of problems.

People both within and without Communist Europe have some reason to be worried about the nuclear power programs in the region. We all know about Chernobyl, but there are other incidents which create concern: The fact that in many of these countries, nuclear plants are being built right within densely populated urban areas; nuclear plants are being built very close to Western frontiers in both Germany and Austria, for example; in many instances, safety features among nuclear plants are almost nonexistent.

A very interesting comment which I quote in my paper involves Soviet scientists talking about why they do not feel that containment vessels should be placed around nuclear reactors, and they responded that containment vessels are placebos to placate the people under capitalism, made necessary by negative dramatizations in the imperialist press.

It seems to me as well that the construction and operation of nuclear power plants in the region at times, and I use this word deliberately, can border on the bizarre. I shall not quote in great detail in my prepared remarks, but I would like to just quote this one excerpt from Rude Prava which is the official paper of the Czechoslovak Communist Party; and Rude Prava is describing the building of one of the two Czech nuclear plants at a place called Dukovany. I quote. Here's what Rude Prava says about how construction proceeded:

> Once upon a time, when they began construction there, they first laid a foundation stone, and functionaries descended on the place in nearly 70 cars. Only much later, almost without blueprints, a few dozen people started the building process in earnest. Many of them had been recruited from a local brick kiln factory, which happened to have closed down recently. The first machinery at their disposal they borrowed from the neighboring agricultural cooperative.

Now the Czechs are not exactly a Third World nation; but I suggest, when folks are building nuclear plants, based on their own testimony, almost without blueprints, employing workers from local brick kiln factories and utilizing machinery from local agricultural cooperatives, that is something that perhaps we should be concerned about.

You may as well be aware of a recent commentary in Pravda literally just the other day—the Washington Post provided a summary of it—bitterly criticizing the contemporary operation at the Chernobyl plant and citing many of the kinds of things, the problems which I have cited in my paper.

Well, for these kinds of reasons then, there has been substantial popular opposition to nuclear power in Eastern Europe, and they have emphasized in their opposition many of the themes I just articulated. They have stressed the nondemocratic nature of the decisionmaking process vis-a-vis nuclear policy in the region, the fact that decisions are being taken in private with no real input from the public.

Perhaps the most highly visible source of opposition after Chernobyl, came from Poland. Some of you may have noticed when you walked into the room here, I have placed up an anti-nuclear poster from Poland. I don't know if the members of the Commission can see it very well, but this is a poster criticizing the Polish nuclear

plant at Zarnowiec and saying that they want to stop it. Well, that kind of opposition has been particularly prevalent in Poland.

Czechoslovakia: We have seen the emergence of a group called Anti-Atom which started a national postcard campaign talking about the need to stop the nuclear threat in Czechoslovakia and asking people to write-in to the Czech Central Committee in protest. I have no particular information on the number who actually did that.

In East Germany there has been wide ranging protest among environmentalists, particularly associated with the Evangelical Church and calling for a national moratorium on the future of nuclear power in the region.

Even in the Soviet Union, there have been a number of examples of popular opposition to nuclear power. Izvestia, the Government newspaper, recently printed a letter to the editor asking for the mass production of geiger counters, so that local residents near nuclear plants could, in fact, measure the radioactive contamination in the atmosphere.

In another article in Izvestia, it was indicated that doctors in many regions near nuclear plants are spending, "most of their time" dealing with radiophobia among the population concerned about the proximity of nuclear plants.

Now what has been the official response to these kinds of protests? I would hypothesize that it is unlikely that these protests are going to achieve their full goal of stopping nuclear power in the region. After all, these are still nondemocratic regimes that can limit the activities of the nuclear lobby. I think too many resources have been devoted in these countries to the building of nuclear power plants.

Third, many people in Communist Europe, just like in the West, sincerely believe that the benefits derived from the atom outweigh its cost. In particular, and this is a point, I think, that is quite relevant for our consideration today, many in Eastern Europe see nuclear power as benefiting the environment, not as a detriment or a threat to the environment because the alternative in this region typically is utilization of brown coal and lignite, which has created in countries like Poland and Czechoslovakia and East Germany some of the most catastrophic environmental situations in the world.

So I think the debate in Eastern Europe and the Soviet Union, in many ways, is somewhat different from what it is in Western countries, nuclear power perhaps being seen more as a friend of the environment rather than a foe.

Finally, I would want to make clear that, while I think that Communist regimes are going to press forward with their nuclear power programs, that anti-nuclear sentiments have had some impact on official policy, perhaps most obviously in Poland where the regime has suspended "temporarily" the construction of its nuclear plant at Zarnowiec. The Soviets allege—I can't prove it definitively that they have, at least in part because of the pressure of public opinion, ceased construction of several nuclear plants; but I think, even more dramatically, all regimes in the region have affirmed an increased and enhanced commitment to nuclear safety.

We see in Czechoslovakia and East Germany, for the first time ever, that these regimes will place containment structures around new nuclear plants. Many of the East European countries as well as the Soviet Union have opened up some of their nuclear facilities to the International Atomic Energy Agency. Therefore, I think that there is enhanced sensitivity, at least in part derived from popular pressures, to nuclear safety in the region.

Overall, though, I would conclude by suggesting that what Lenin once said should never happen in a Communist polity—He said, the worst sin of all, comrades, is what he called "khvostism," which roughly translates as tail wagging, meaning that the tail, the people, should not wag the dog or the head, that is, the Communist Party. But I would suggest that the emergence of a nuclear lobby in Eastern Europe and the Soviet Union is in fact an empirical example of "khvostism." It's out of the bag. Those people are there. They have already exerted some influence on public policy and, in my judgment, will continue to do so in the future.

Thank you.

Chairman HOYER. Thank you, Dr. Kramer. Let me, first of all, apologize for the late start of this hearing. That was the result of my being in another meeting which I was also chairing, which means that the Chairman didn't bring it to conclusion soon enough. But in any event, I want to apologize to the witnesses, thank them for being with us, and thank Senator Wirth for starting the hearing for us.

Now Dr. Lampe.

STATEMENT OF DR. JOHN LAMPE

Dr. LAMPE. Congressman, thank you very much. Members of the Commission and ladies and gentlemen, I'm pleased to be here on behalf of the Wilson Center's East European Program where, as someone who is not an environmental specialist, I have been drawn into the issue, because it's just so important in Eastern Europe today.

It's perhaps worth mentioning a flier outside that indicates that Barbara Jancar will present her paper on "United States/East European Environmental Exchanges, the Unknown Network" at the Wilson Center this Thursday from 3:30 to 5:30. The flier gives you the particulars.

That colloquium represents the most recent interest of the Wilson Center's East European Program in this environmental question. The original interest came in a workshop 2 years ago just at the time of Chernobyl, when my predecessor, George Hoffman, organized the meeting. Even then, it was clear that the non-nuclear problems in Eastern Europe were well known and very serious, beginning with air pollution from vehicles and factories and from brown coal-burning electrical plants, causing lung disease, killing forests. Add to that, river and groundwater pollution, which has made water unsafe for human consumption in some villages and threatens even the water supply in large cities; and then chemical pollution, both from industry and agriculture, which makes the disposal of toxic waste an issue that must now be faced in Eastern Europe.

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These problems are most serious in that contiguous corner where Poland, Czechoslovakia, East Germany meet and, to some extent, on into Hungary; but they're real elsewhere in the region and getting worse. To the considerable extent that the increasing introduction of nuclear power with Soviet technology has been part of the official strategy to deal with these problems, as John Kramer was saying, the Chernobyl disaster dealt a serious blow to public confidence in "better science" as a way out of obviously worsening circumstances, at least as far as better science was linked to Soviet technology in an area where it was previously assumed to be world class.

My own trip to Eastern Europe, last spring, preparing for the full-scale conference that we staged at the Wilson Center in June 1987, made me aware of two truths: First, how conscious, how anxious, how scared these problems have made the large, educated public across Eastern Europe—I think some committee members have returned from some recent travels with that same impression; and second, how limited the framework for public policy and, particularly, for real leverage in public policy for coercing the ministerial-industrial complex, not the military-industrial complex but the ministerial-industrial complex really remains.

In surveying the spectrum of East European countries, I ask you to note a number of national differences. Each of them is consistent with what we know about the way public policy is made in that country in other regards. In my prepared remarks I omit the DDR for lack of time and knowledge, and Romania because there I find no willingness even to recognize the problem. In the others, one common feature has been the absence of a full-scale ministry for the environment; that is, until Hungary established one this past January.

Another is an expressed interest in Czechoslovakia, in Poland, in Hungary and in Bulgaria in greater knowledge of and cooperation with the American environmental establishment; and that really was a major achievement of our conference last year, the meetings with EPA officials, foundation people, for the very independent and impressive scholars that came from each of these countries to our conference. Those we'll be publishing, along with some Yugoslav, Austrian and other Western studies in a Wilson Center volume before the end of this year.

Yugoslavia and Austria, I think, should be set aside, not only as nonaligned and neutral respectively, but because environment policy there comes from beneath in a Western fashion. Their problems are not the same as in these other economies.

For saving time, let me concentrate on Czechoslovakia, Poland and Hungary and leave the Bulgarian remarks in my text.

For Czechoslovakia, first of all, the small (550 employees) but supposedly prestigious State Committee on Science has designated one of its seven departments to deal with environmental protection. The department's 35 scientists are there on special assignment, but they work within a framework of bureaucratic control in a very imposing ministerial building where it looks like things don't happen fast; and I think that's a correct impression. That gives the large industrial polluters little cause for concern.

This Committee is as close as Czechoslovakia has come to an EPA, although plans for a separate agency have been formulated. At least the country's media are now forthcoming about reporting environmental damage; and the collection of technical data is reportedly very good in Czechoslovakia, although still closely held. It's not widely disseminated.

Also, Czechoslovakia possesses formidable stock of well-educated specialists that includes a large number of highly trained specialists in institutes and universities who have already done some good environmental research. Some of this cadre attended a workshop on agriculture and the environment jointly sponsored by our National Academy of Sciences and the Czech and Slovak counterparts in Czechoslovakia last April.

I sat in, and I was impressed, as were a number of other American scientists. Glenn Schweitzer, who will be a commentator at Barbara Jancar's presentation on Thursday—headed the American delegation there. But better protection in Czechoslovakia is going to take more than the data these scientists are assembling. One estimate reckons that 3.5 percent of all investment in the economy for the early 1990's will have to be devoted to environmental protection if there's going to be any real improvement; and that's a big percentage, 3.5 percent.

For Poland, as noted in the excellent Radio Free Europe background report, which I recommended to the Commission—Poland's written regulations for environmental protection are the most detailed and stringent in Eastern Europe, but they're most frequently observed in the breach. One large aluminum plant was actually closed some 10 years ago because of dangerous fluoride emissions, and some others have been forced to limit their emissions since then; but these initiatives came from unofficial public pressures. As perhaps Dr. Jancar will indicate, the big metallurgical enterprises and the power plants who are the worst offenders remain untouched by official admonitions, occasional fines, even repeated public pressure.

As a concession to that pressure, the Government several years ago appointed a leading independent scientist to a ministerial position with some environmental authority. There was a lot of hope for this when it happened, but his presence proved ineffective, and he's since departed. Under what circumstances, I'm afraid I don't know.

The necessary restrictions on enterprise behavior remain expensive; and the shortage of new capital plus Soviet pressure for expanding the very metallurgical production which should be cut back—this does not promise rapid improvement, even if the present stalemate between state and society in Poland can be resolved.

Turning finally to Hungary, the National Office for the Protection of Nature and the Environment in Budapest was the closest thing that any East European country had to an EPA organization, until the new ministry was created from it on January 1 with the old Water Protection Agency added to it. Its budget is still small; the staff, 150–200, and the stiff fines that they can impose are typically covered immediately by state subsidies. But still the organization seems ably staffed from top to bottom. Its own publications

and its collection of outside information are the most extensive, the most precise in Eastern Europe. They have a yearbook on the environment that's very impressive indeed.

Hungary's performance has been good at least in appraising the environmental risks and the high, presently unbudgeted protection costs that will be required for the new Gabcikovo-Nagymaros Dam project that is being undertaken jointly with Czechoslovakia. Czechoslovakia has a lot to gain. The Hungary side is worried about the resulting diversion of the Danube that would threaten the water supply, even down as far as Budapest. There has been an impressive review of this project with criticisms raised, although here the special inquirer came from the Hungarian Academy of Sciences and public pressure, and the decision is, I think, at this time to go ahead with the dam project anyway and assume that that budgetary funding that is not now in existence, will be found when the time comes.

In response to growing concern about the disposal of chemical wastes, some of which has been imported from Western Europe for hard currency, the Hungarians did organize a major international conference on hazardous waste in Budapest last fall.

In conclusion, the overriding problems facing environmental protection for all these East European countries are not the absence of appropriate legislation—there's a fair amount on the books—or perhaps even a powerful ministry, nor increasingly is it the lack of accurate scientific data on the extent of the problem—it's there even if it isn't published widely, as in the GDR or in Czechoslovakia—or even a lack of public awareness that something more needs to be done very soon, because that's there.

The two major problems are rather that the already serious damage getting so much worse so quickly, No. 1; and No. 2, that the apparatus of central planning in a command economy leaves the major polluters, the large state enterprises, free from the threat of closure, free from any possibility that they could not draw on a government subsidy and simply cover a fine of any size without the fear of reduced profit margins that have made environmental sanctions effective in West European market economies. But a final word of caution is in order here.

At the same time that we consider economic reforms in Hungary and elsewhere and say, if we just reform the enterprises, make them interested in profit margins, we are tempted to assume that that's going to give us some kind of relief on the environmental front, too. In the long run maybe so; but right away, the emphasis on higher profit margins in the short term in these current economic reforms for Hungary does not really create a promising climate for effective sanctions. The high expenditures that would be required for filters and absorbing third party costs are the very sorts of expenditures that enterprises that want to show short-term results, the kind of results that Gorbachev is being criticized for and not producing in Soviet agriculture—will hesitate to undertake.

So, in sum, East European policy makers face some very hard choices and real dilemmas, and I think whatever exchange they can have with the vast experience and expertise in the United

States—not that we've solved all the dilemmas—is very much to the good.

Thank you.

Chairman HOYER. Thank you very much, Dr. Lampe. I realized that I didn't give your biography, but it's my understanding that Senator Wirth has already done that, so that everybody knows who we have with us.

Dr. Ziegler, we appreciate your being with us.

STATEMENT OF DR. CHARLES ZIEGLER

Dr. ZIEGLER. Thank you, Mr. Chairman and members of the Commission. Unfortunately, or fortunately, there's a lot going on in the Soviet Union right now environmentally and, even though I'm going to focus exclusively on that country rather than, as some of my colleagues here talking about Eastern Europe, I think what I have to do is a fairly monumental task for 5 to 7 minutes; but I'll try.

What I want to do is outline some of the current problems and new developments in environmental issues under Gorbachev. I want to look at very briefly what I think is a really interesting question, and that is the tie-in with ethnic discontent in the Soviet Union, which has not been studied very extensively but which I think is very important and will continue to be so in the next few years.

Finally, I want to look at some administrative and economic changes which are only now beginning in the Soviet Union that relate to environmental protection.

First of all, the current problems and new developments: Very briefly, I'm just going to go through these. Water pollution and questions of water supply remain, as they have in the past two to three decades, the single most important environmental question in the Soviet Union, particularly in the industrialized and highly populated region west of the Ural Mountains, in European Russia, in other words, although certainly water problems in Siberia and in the Far East exist and are very important, as are those in central Asia.

Approximately 75 percent of state expenditures on environmental protection go exclusively to protect water resources.

Some of the major environmental issues that have been on the agenda since Gorbachev became General Secretary: The river diversion projects. I think most of us have heard of these. There are several. The major ones are the plans to divert massive amounts of Siberian river waters from the Ob and Irtysh Rivers southward into central Asia, primarily for irrigation purposes, and to divert some northern Russian rivers southward to replenish the Volga River which has been deplenished by irrigation in south central Russia.

These plans were shelved in August 1986, formally by the Party's Central Committee and the Governmental Council of Ministers, and although this has happened, it's interesting that the debate has continued over whether or not to go ahead with these projects. Generally, in the past under Brezhnev you would not find debate

continuing in the press, the official press, once the party had made a decision to shut down a project.

The basic issue or contention here is between central Asians, in particular, who claim that the Siberian River diversion is necessary for irrigation and continued economic development in their region, and Russian environmentalists, in particular, scientists and, even more significantly, writers who are opposed to what they see to be the desecration of the Siberian heartland, if you will, of Russia.

Lake Baikal, what really kicked off the environmental movement in the Soviet Union: Under conditions of *glasnost* in the past 3 years or so, we've seen an admission that the measures taken in the late sixties and early seventies to protect this largest body of fresh water in the world from pollution by cellulose plants has not really succeeded, and indeed the feeder rivers such as the Selenga have become increasingly polluted, while air pollution of the areas around Irkutsk and other cities, seepage of wastes and so on, threaten the lake and have had an impact on the natural cleansing abilities of what the Russians perceive to be a unique treasure.

The Kara Bogaz Gulf on the east shore of the Caspian Sea, and the Aral Sea itself in central Asia are two other important issues now on the agenda. The Kara Bogaz Gulf completely dried up in 1980 after a decision was taken to construct a dam, shutting off the water inflow from the Caspian Sea, with the idea that this would help the Caspian. What it did was dry up the Kara Bogaz and result in brine salts being blown off of this new salt desert onto surrounding agricultural areas.

A similar thing has happened in the Aral Sea where 25,000 square kilometers or nearly half of the surface area of that sea has dried up, and Soviet scientists forecast that the sea will dry up entirely by the year 2010 as a result of the decline of inflow from the Syr Daria and Amu Daria Rivers, which decreased from 60 cubic kilometers per year in 1960 to only 4 cubic kilometers in 1987.

In Leningrad, the final issue that I want to mention briefly, the pollution of Lake Ladoga in the Gulf of Finland by the Pryozorsk cellulose combine, by agricultural runoff and by municipal sewage have generated a good deal of interest in that city. Intellectuals and ecology clubs in Leningrad have actively opposed the construction, furthermore, of a dam across the Gulf of Finland which is designed to regulate flooding in Leningrad which, as you probably know, is the Venice of the Soviet Union and there are lots of canals and so on; but although this dam may prevent flooding, some scientists have argued that it will also inhibit natural cleansing of the canals around—and the water resources around Leningrad.

Glasnost has resulted in more open discussion of ecological problems in the Soviet Union. We see, as I mentioned, new information on Lake Baikal. We see more critical debates in the Soviet mass media, such as over the river diversion projects. We see the formation of numerous ecology clubs disseminating unofficial information in the form of small distribution bulletins, and we see a new tolerance for mass demonstrations regarding environmental pollution, and greater responsiveness to public opinion.

Very briefly, two examples of this: Earlier this month, the Minister of Ferrous Metallurgy shut down a coke furnace at a smelting plant after 10,000 people demonstrated in the Ural mountain town of Nizhni Tagil. The demonstrators, by the way, blamed 54 stillbirths in 1987 on the plant's pollution.

Another example: Soviet Health Minister Yevgenii Chazov just recently discussed the health effects of pollution, something that is becoming more acceptable to talk about now. There has been a rise in infant mortality, increased respiratory problems, and outbreaks of infectious diseases such as hepatitis in many areas of the Soviet Union, but particularly in the Transcaucasian Republics.

I think it's fascinating that, just prior to the February/March 1988 demonstrations in Armenia for return of the Nagorno Karabakh autonomous region, that Armenian scientists, cultural figures, students and others had demonstrated demanding that the Central Government pay more attention to Armenia's severe pollution problems, which include air pollution in the capital, Yerevan, from chemical plants and traffic, and the threat of radiation from the Medzamor nuclear power station just outside the capital.

A journalist by the name of Zori Balian had written two articles in the Literary Gazette, a national newspaper, detailing the stillbirths, birth defects and infertility which have been caused by chemical pollution in Yerevan. Also, the same thing happened in October 1987 where mass demonstrations against pollution, then the next day turned into demonstrations for the return of Nagorno Karabakh.

This leads me into the issue of ethnic strains reflected in ecology demands in the Soviet Union. Since my time is short, I'll just skim over these very briefly to give you an idea of what's happening.

In Armenia, as I mentioned, the ecological lobbies there have accused Soviet authorities of biological genocide against the Armenian nation because of the pollution there.

In Georgia, intellectuals have written letters opposed to the construction of a railway linking the cities of Ordzhonikidze and Ksani that will supposedly damage forests and historical monuments, and also result in the influx of non-Georgia labor.

In the Ukraine and the Baltic Republics—this has been mentioned by Dr. Kramer—there's been opposition to nuclear power, particularly after Chernobyl; and he mentioned a radiophobia in the Ukraine.

In central Asia, as I mentioned with reference to the river diversion projects, there is a resentment in these republics of what they perceive to be selfish Russian demands to end the proposed diversion. They see the Russians as trying to restrict their economic development, while the Russian nationalists, particularly, the writers, are sensitive about the central Asians' disregard for the national treasure of Siberia.

Now to turn to the administrative and economic measures and conclude with that: The Soviets have recently, meaning in January of this year, formed a State Committee for Nature Protection or Goskompriroda, which is set up as a Union Republic Committee, meaning that it has parallel Committees in the 15 Republics; and there are units to be established in the lower territorial units.

The State Committee for Nature Protection is to be the central organ of comprehensive state management or administration in nature protection and the utilization of natural resources. It will attempt to coordinate the activities of ministries and departments that affect the environment, and its decisions are to be binding on them. The Committee is to have broad competence in air and water pollution, soil conservation, regulation of municipal wastes, direction of the zapovedniki, nature preserves roughly equivalent to our national parks.

They are to develop scientific technical measures for pollution abatement, approve ecological norms and standards, organize ecological education and plan and implement cooperation with other countries and international organizations.

These functions would seem to overlap in part with those of the State Committee on Hydrometeorology and the Environment which, up until now, has functioned as the Soviet equivalent of an EPA, although its functions have—the functions of environmental protection have been distributed among other agencies in addition to the Hydrometeorology Agency.

The new head of Goskompriroda appointed in March 1988, is Feoder Morgun, an agricultural specialist, a member of the Central Committee, Deputy to the Supreme Soviet and First Secretary of the Poltava Oblast of the Ukraine since 1973.

Finally, *perestroika* and environmental questions: The same Pravda article that announced the formation of Goskompriroda emphasized the need to move from administrative to primarily economic mechanisms in environmental protection, both by making polluters pay the full social costs of pollution and by developing prices for natural resources that will eliminate waste. However, under the new laws on cost accounting and self-financing whereby 60 percent of Soviet industrial production since the first of this year is responsible for carrying its own weight economically, these measures mean that it will be even more difficult for many firms to cover their costs, if they have to take account of pollution abatement equipment and other measures.

In addition, I think it's important to point out that those sectors of the Soviet economy that are central to Gorbachev's modernization plans, such as machine building—metal working sector and the chemical and petrochemical industries, have proportionately the highest costs of pollution control among the various sectors of the Soviet economy. Furthermore, the Soviet economy's poor performance in 1987 will likely mean sacrificing investment in pollution control measures.

Perhaps the only bright spot ecologically is continued Soviet reluctance to undertake questionable, ecologically questionable, and economically very expensive projects such as the diversion of rivers.

Thank you.

Chairman HOYER. Thank you, Dr. Ziegler, very much. Dr. Jancar, I wasn't sure that we were going to get to you, but we did; and we're glad of it. Thank you very much for being with us. Dr. Barbara Jancar.

STATEMENT OF DR. BARBARA JANCAR

Dr. JANCAR. Mr. Chairman and members of the Commission, at first I was happy to come here, and then you told me I could only talk 5 minutes on a problem which 3 years ago could have been summarized in 5 minutes, and now it has become, as Dr. Ziegler has pointed out, a very, very complex and fascinating, absolutely fascinating issue.

Chairman HOYER. Let me, if I can, Doctor, interrupt you so the audience knows. It was the tyrannical staff that limited you to 5 minutes, not us. We would not do that.

Dr. JANCAR. I withdraw my accusation.

Chairman HOYER. They're equally tyrannical with us, however.

Dr. JANCAR. You or your staff have asked me to take up two related matters: (1) to give a general overview of the more important unofficial environmental groups in Eastern Europe and their attempts to coordinate policies; and (2) to assess the impact on policy formulation these groups might have, as well as their ability to generate support.

Now the emergence of these groups is a very recent phenomenon resulting, in my opinion, from the convergence of four discrete developments in Eastern Europe. The first is the official recognition of the disastrous environmental legacy of 40 years of Communist rule. In Czechoslovakia, Poland and the GDR, there are areas, and I have seen them, so degraded, devoid of life, they are fast approaching the ecological barrier where further economic development is impossible.

The second is the catastrophe of Chernobyl which catapulted environmental issues to the forefront of public awareness in all the East European countries, particularly those where the fallout was most noticeable, Poland, East Germany and, I might say, Yugoslavia, though I understand Yugoslavia is not technically within the purview of this discussion.

Third, Gorbachev's policy of *glasnost* provided the political impetus for the emergence of these groups into the public light of day. The call for democratization has been answered differently in each of the countries of the area, depending on national conditions, but the call is there and, apparently, is irrevocable at this point.

Lastly, the formation of unofficial groups of all kinds has been the result of the efforts of segments of public opinion to propose alternative solutions and methods of operation to those offered by the authorities. This hidden agenda, as I call it, is very much part of the environmental movement and, I don't believe, can be separated from it.

To turn to the environmental groups: We have no accurate or complete information on the exact number of environmental groups operating in each country, nor their size. In fact, you sometimes wonder whether you should even call them a group. Do they indeed have an organization? But in all events, there are many names that keep appearing in the literature.

Those which have reached Western attention are described in the paper, and I would like particularly to draw attention to the church-backed groups in the German Democratic Republic, the Polish Ecology Club which was responsible for the closing of the

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aluminum plant mentioned by Dr. Lampe; the Danube Circle and the Blues—I love the Blues—in Hungary; and I would also like to mention in Czechoslovakia not unofficial groups, but the official groups which have come out and started to become involved in environmental problems.

A group breaking off from the Slovak Society of the Defenders of Nature published a study called *Bratislava Aloud* which severely criticized the terrible environmental conditions in Bratislava. I mean the smell of chemical pollution in that city is—well, you just visit it.

The authorities cracked down on this group, accused them of practicing 1968 tactics, but the fact of the matter is this was a semi-official group that made this criticism.

In Hungary, we should stress again the Danube Circle and the Blues, but also there are a great many other groups that have emerged in opposition to the construction of the hydroelectric facility on the Danube which is going to be built jointly by Czechoslovakia and Hungary, with construction being partially financed by Austria. So we have a trilateral problem which is being addressed by a very active environmental movement in Hungary.

The groups appear to share certain similar characteristics. With the exception perhaps of the Polish Ecological Club, they are primarily local, responding to local issues or are single issue oriented. These issues include not only conservation and pollution problems, but preservation of historical monuments as well. This last issue is particularly salient in the U.S.S.R. in the environmental groups in the Union Republics and in Russia, as part of that hidden agenda of the environmental movements.

The groups are primarily composed of young people with higher education, and led by intellectuals, concerned scientists or writers and the cultural intelligentsia. Here, we probably should particularly mention Vladimir Rasputin as a leader of the environmental movement. I wouldn't even give him an entirely positive rating in his leadership, since he's very much great Russian oriented.

A final characteristic of these groups is their inability, so far, to coordinate policy to mobilize a more general public in the cause of the environment. This characteristic, I might point out, is not unique to the area, but is found in the operations of environmental groups in the West. Environmental issues tend to be localized, and groups naturally organize around local problems.

The factor which particularly hinders the coordination of policy among environmental groups, in my opinion, is the hidden agenda. One point of division is whether the Communist system per se, or the malfunctioning of the Communist system is the cause of the ecological disaster. You can think of the Greens in Germany and ask yourself the same question in Germany, except say capitalist system.

Depending on your answer, what alternative strategies should be applied? The Danube Circle in Hungary tried to be apolitical, but the authorities perceived its activities otherwise.

Is the best strategy to join forces with official organizations and through interpenetration, bring about environmental management reform, as appears to be happening in entirely different conditions in Yugoslavia and Czechoslovakia?

With reference to Czechoslovakia, in my paper I describe the official visit of the Adirondack Mountain Club of upstate New York with the Czech Society for the Defense of Nature last winter. I believe this is the first meeting of its kind with an official Czech environmental organization.

Or should one join in what Vaclav Havel has called the alternative society and operate outside the system completely? Should the groups engage in modes of political opposition traditional to the West, or should they attempt to link up with Western groups in an "across frontiers" ecological movement? Or should they use environmental issues to promote nationalism, as is being done in the U.S.S.R.?

Any and all of these strategies is being tried. One of the most significant developments so far, was the conference organized in Poland by peace activists who called themselves the Freedom and Peace Movement, last June in Warsaw.

This first meeting of unofficial groups in Eastern Europe attempted to address the whole problem of group cooperation and coordination within Eastern Europe and between Eastern Europe and the West; and it tried to arrive at a common program, based on the Helsinki accords, peace and human rights, environmental issues, and the insistence on nonviolent struggle.

It is hard to assess accurately the impact these groups are having on the formulation of policy, but there's no doubt that they have influenced policy decision in at least two directions. They have forced the authorities to put the environment at the top of the national agenda, and in many instances have brought about a reverse of an official decision or saved a threatened conservation landmark.

Second, they have moved into the mainstream of the unofficial opposition movement and contribute to keeping pressure on the regimes to reform.

The risk, in my view, is that in being perceived as anti-state agitators, they may destroy their ability to influence the regimes toward the very, very much needed environmental actions.

Thank you.

Chairman HOYER. Thank you very much. Senator DeConcini, whom I did not introduce when he came in. The Co-chairman of the Commission, Senator DeConcini.

BRIEF STATEMENT OF COCHAIRMAN DeCONCINI

Cochairman DECONCINI. Mr. Chairman, thank you. I would welcome the witnesses here, and sorry I was late; and I have to leave to go to another Appropriation Committee meeting with the chairman of the subcommittee on the Senate side. I would ask that my statement be printed in the record, and I compliment the witnesses. This is very interesting subject matter, one that I had really not addressed myself, and I'm very impressed with the resumés and biography information on these witnesses. I think this is a very appropriate subject matter for our Commission to undertake.

I thank the Chairman.

Chairman HOYER. Thank you very much, Senator.

Let me start with the fact that, obviously, one of the purposes of having this hearing, as I'm sure Senator Wirth observed, on the anniversary of Chernobyl, is to address the enormous environmental problems that transcend boundaries as did Chernobyl. How does one pronounce that? That's my first question. I've heard it pronounced a couple of different ways. Is there a consensus on that? "Try the last one," somebody said. All right.

Chernobyl has given great impetus to whatever environmental movements existed at the time. A number of you—Dr. Jancar in your conclusion, but a number of you, I think, referenced the impact of the environmental movement on the political arena. In the Soviet Union, do you foresee a backlash?

Ligachev is, obviously, presumed to back *perestroika* but not necessarily *glasnost*, because he believes it to be destabilizing. What have you seen with respect to the environmental groups and a backlash from the Government?

Dr. Ziegler, maybe I'll look to you first, as you discussed the Soviet Union in particular; but I'd certainly like to hear any other comments.

Dr. ZIEGLER. Well, I don't, in particular, see any sort of a backlash. There is a broad consensus in the Soviet Union that something needs to be done with the environment, as there is with the economy, that some reform needs to be accomplished there. About the only thing I could think of would be in the realm of what I had mentioned, the nationality question where some of the groups are taking this in order to enhance nationalist demands.

One example of a group that the Government is not very happy with is Pamyat or it translates roughly as memory, which is a very strange concoction of people who are fiercely nationalistic, Russian, anti-Semitic to various degrees, not too happy with the other nationalities of the Soviet Union, determined to preserve the cultural and historical monuments, somewhat religious. Some of them also revere Lenin, in addition to, say, the czar, the last czar. It's a very weird amalgam of peoples.

Now I could foresee a backlash here against a group such as this, because to the extent that you're pushing environmental questions, health questions, that is, by and large, acceptable. To the extent that you are pushing for confrontation among nationalities, that is not acceptable.

Chairman HOYER. Well, *perestroika,* I think most of us accept, is driven by the perceived need of Soviet leaders to reinvigorate their economy. In our country we have seen that one of the conflicts has been between the environmentalists, who are perceived in some respects as being for no growth and no economic expansion, and those who see economic expansion and creation of jobs as essential to quality of life, et cetera. That dichotomy has existed.

To what extent do you see that in the Soviet Union? Perhaps that's a better way of stating it. For instance, when I mentioned Ligachev, he, obviously—if not the entire Politburo, from my perception, universally accepts the premise that their economy is stagnant, that their centralized, bureaucratically-run system has failed, and that they need to change it in order for their society, as they know it, to survive.

However, *glasnost* has led to, of course, an open discussion of problems and a growing political awareness among the public of these problems. Do we have instances that you know of where we have seen the Soviet Communist Party respond to environmentalists that you are harming our economic reforms?

Dr. ZIEGLER. No. It's generally the opposite, where environmentalists use economic arguments are saying that pollution is costing the economy. It's costing in terms of health. It's costing in terms of the impact on capital equipment. This argument has been used for—well, throughout the quarter century of the Soviet environmental movement.

In certain cases, yes, it is posed as protecting the environment versus economic modernization. I would say that in most cases, although we can cite instances of environmentalists winning in the Soviet Union in recent years—In most cases, I think when push comes to shove, economic modernization is going to take priority over environmental questions.

Chairman HOYER. Dr. Jancar?

Dr. JANCAR. I would look at the question a little bit differently. The question can be posed, well, whose territory are you going to destroy for the benefit of economic modernization? There's this huge phosphate lode in Estonia which was mentioned, and it's rumored that there is uranium there, too.

Now the Estonians don't want it developed. The great Russians do. So you could very well have the situation where the Great Russians happily destroy the environment of Estonia, but then you have *Pamyat* and Vladimir Rasputin talking about mother Russia and the preservation of the ecological purity of mother Russia. Then on the other hand, you have the Armenians talking about biological genocide. Those are strong words.

Again, this is a question of where do you find your natural resources for economic development, and who is going to have to give on this issue in the environmental area? I think the Aral Sea tragedy is one of the most interesting. Again, I've done a particular study of Vladimir Rasputin. He had an interview with Literaturnaya Gazeta, I think, the first week in January; and he talks about the diversion of the rivers in this almost Wagnerian feeling about mother Russia. Well, so—I mean, who cares whether they don't have water down there in central Asia? Obviously, the Uzbeks feel completely different on it and are pressing, with the help of some very hefty Soviet ministries like the Water Ministry, to have that decision reversed.

So it's much more complex than just industry versus the environmentalists. It's whose industry, where and how?

Chairman HOYER. Would anyone else want to comment on that? I have another question aside from that one—yes, Dr. Kramer.

Dr. KRAMER. Mr. Chairman, yes. One could make a very good argument that—about the only argument one could make, but a very good argument, that environmental protection, in many ways, is quite consistent with the thrust of *perestroika*. I think one reason why you have such massive pollution in both the Soviet Union and in Eastern Europe is because of the very inefficient economic systems.

Just take a look, for example, at the use of energy. Now the data will vary a bit, but typically, East European and Soviet data themselves make clear that to produce a similar unit of national income in comparison to a Western state, they use anywhere from 30–50 percent more energy.

Well, if you're burning brown coal and lignite, you know, it's catastrophic for the environment. So why do they use so much more energy? And there are a lot of reasons for it, but one of them is because natural resources in Socialist systems, for all sorts of reasons, are dramatically underpriced. So you have a disincentive to conserve.

Now *perestroika* then is, in effect, trying to make this economy lean, mean and efficient. One of the ways they're trying to do that is, clearly, through a reform of the price mechanism, to have production activity reflect the full cost of production. In fact, if that became so, there then would be an enormous incentive, not disincentive, to enormously reduce energy consumption with concomitant benefits for the environment.

Chairman HOYER. I think that's an excellent point. I hadn't thought of it in those terms, but I think that's an excellent point.

Now, Dr. Jancar, you mentioned Estonia. What are the tensions there and what are the tensions, for instance, between Czechoslovakia and the GDR?

Dr. Jancar, in your paper, you pose GDR as the biggest polluter of the air of the East European nations. Now what tensions is that causing? We know that Chernobyl created great concerns. What tensions are other means of pollution causing among or between nations of Eastern Europe, that is, are the Czechoslovaks yelling at the GDR?

Dr. JANCAR. There are several that could be mentioned. Certainly, the—of course, officially they're all friends and acting in brotherly cooperation, but——

Chairman HOYER. You've gotten that on the record, so we'll move on. I'm teasing. You're right.

Dr. JANCAR. But is it brotherly cooperation? It shouldn't be forgotten that the Germans occupied those areas 40 years ago, and nobody has forgotten that there; and there are some 3–5 million East Germany tourists in Czechoslovakia every year using their two national parks, whose combined area—Oh, my goodness, they are really small. One of the big problems there is just pollution traffic from tourists, and how do you keep the East Germans out?

Now when that's combined with the transborder pollution, these are areas of disagreement. There is public tension but, of course, officially there are no tensions there. There was also a public reaction in Poland when a Czech chemical plant spilled a sewage into a border river between Czechoslovakia and Poland. There were groups demonstrating on the Polish side that the Czechs should be made to clean it up.

This was—I saw that on Polish TV. So it, obviously, had to be something approved by the Government. So that's another area of tension. There's considerable tension between Poland—Hungary and Romania over Romanian pollution of transboundary waters which go into Hungary, and this is also felt in Yugoslavia.

So there are these tensions that exist in what is supposed to be a very harmonious part of the world, and there are bilateral agreements. There is one between the GDR and Czechoslovakia; but to the best of my knowledge, it's just stayed as an agreement.

Chairman HOYER. Would anybody else care to comment on that; specific instances or examples of tensions that have been caused?

Dr. LAMPE. Well, I might, yes.

Chairman HOYER. Let me say in this context, obviously, even very close allies, that is, Canada and the United States, have problems. There is, of course, the United States contributing to acid rain, and the Canadians are not too enthusiastic about that. All of us know that. As a matter of fact, Mulroney is down here, and I'm sure that will be an item that he discusses with the Congress—What is it?—tomorrow, I think, when he addresses a joint session.

Dr. Lampe, you wanted to comment?

Dr. LAMPE. Just to add that this Romanian-Hungarian problem is a more serious one for relations between the two countries, I think, because the relations are bad anyway because of the Hungarian concern over the conditions for the Hungarian minority in Romania; and, of course, all of the population of Romania has some serious difficulties at the present time.

On the other hand, let's take the Hungarian attitude toward Czechoslovakia because of this dam project in Slovakia that used to be Hungarian territory, or part of it used to be Hungarian territory. It doesn't seem to carry the same impact as this Romanian issue.

Now there's another concern further down the Danube between Bulgaria and Romania, where a chemical plant on the Romanian side of the Danube is sending horrendous chloride and sulphur pollution across the river to the town of Ruse. Its population faces documented medical problems as a result of this; and there have been demonstrations now, and also articles printed in the Bulgarian press, objecting. Here we see a growing recognition in Bulgaria, as well as elsewhere in Eastern Europe, that things have gone so bad domestically in the Romanian case that one is not bound by fraternal Socialist ties.

To be fair, we should remember Romania's independent foreign policy—that was not something these other governments have ever liked anyway. So you can't pull the environmental tensions out of the general political context. I guess that's what I would conclude.

Dr. ZIEGLER. Mr. Chairman.

Chairman HOYER. Dr. Ziegler.

Dr. ZIEGLER. If I may, I'd like to add something to that. Two instances that I know of from the Soviet perspective on tensions, certainly subdued, subliminal tensions with Eastern Europe. One is the problem of acid rain. I brought this up at an interview in Moscow with some members of the United States and Canada Institute. Some Western scientists had estimated that approximately 2 million metric tons of sulphur dioxide were deposited on Soviet territory from Eastern and Western Europe in the course of a year.

I brought this figure up, and they said, no, you're wrong, it's 12 million tons of sulphur dioxide, and they said the primary polluters were West European, namely, the British, the French, the West

Germans; but they did acknowledge that pollution also came from East Germany, from Poland, from Czechoslovakia.

So this is a net inflow of 12 million metric tons of sulphur dioxide per year, which means they do have a severe acid rain problem, particularly in the Baltic States and across northern Russia.

The other issue involves the nuclear power plants in the Ukraine and the Baltic areas where—and I think Dr. Kramer alluded to this—because there really are no other alternatives—the alternatives are either going with brown coal or lignite or, what they can't do economically, importing oil from the West and paying hard currency for it. The alternative to that is nuclear power, and many of these stations being built or expanded in the Ukraine and the Baltic Republics provide electrical energy through COMECON into Eastern Europe.

So this is also a source of tension, and one of the reasons that the Soviets feel that they need to go ahead with nuclear power in that particular densely populated area of the country, even after Chernobyl.

Chairman HOYER. Let me ask another question. I think most of you addressed this, but I'd like to get it specifically answered. Do all of you or one or more of you perceive the environmental movements in Eastern Europe and the Soviet Union to be permanent in nature, or transitory?

Dr. JANCAR. I think one has to ask the same question, say, of the Sierra Club. I don't see the Sierra Club going out of existence. Well, maybe in 1,000 years. I think that, as the environmental issues have become part and parcel of the issue of politics in the West, it's——

Chairman HOYER. The same phenomenon in the East?

Dr. JANCAR. I'm particularly interested in looking at this comparative aspect to see whether indeed one can make that sort of hypothesis, but it seems to me that the conditions are such that they aren't going to be solved in the near future; and it's something which—therefore, the movement isn't going to end in the near future.

Chairman HOYER. Dr. Kramer?

Dr. KRAMER. I might have a slightly different perspective here, and to say as categorical as an academician can be, it's probably going to vary. That may be wishy-washy, but it's as categorical as I can get.

I think some of this, of course, was stimulated by very specific events such as Chernobyl and, if other things like that happen—might not just be nuclear accidents but catastrophic environmental occurrences—that's, obviously, going to fuel even more of these movements. But I also think it has a lot to do with the general political atmosphere in the region.

It's not clear to me, for example, that *glasnost* is inevitable, that it's going to stay around. If the political climate changes, you may well find that these groups don't have much choice but to go out of business. I don't see a vibrant environmental movement in Romania, and I think it's perfectly obvious why, because of the nature of the regime.

If other regimes, Czechoslovakia, for example, really start to crack down or the Poles really start to crack down, that's obviously

going to have dramatic implications. So I think that awareness of the environment and concern is there, and I think some of the movements in fact are going to be around; but I think there are a lot of exogenous variables which are also going to influence their future fate.

Dr. JANCAR. Could I strongly contradict that?

Chairman HOYER. Well, you could disagree with it.

Dr. JANCAR. Because I think that one can discern a worldwide type of environmental movement developing and one of the interesting things is the fact that the Polish Ecology Club is now an official member of the Friends of the Earth and is on their International Board. So that you have a situation where ecological groups from all countries are reaching out.

Now I would agree that political pressure is going to determine to what degree they can really operate or publicize or whatever. We don't know whether there's some—well, we do know that there's some environmental people there in Romania that are sincerely concerned about the Danube delta and so forth, but I feel that this very definitely is a permanent phenomenon that will vary in coming out publicly or nonpublicly, underground or above ground, but that it will be permanent.

Chairman HOYER. Dr. Lampe.

Dr. LAMPE. Yes, I would add to that that the prospect for permanence grows brighter as these regimes, leaving out Romania and not Bulgaria yet, are groping toward some sort of new balance between state and society where there's still only one party but other interests are represented; there is a multiplicity of interest groups somehow represented in the parliament in Hungary, in other ways in Poland. This environmental constituency is such an obvious interest group and has already established itself, as Dr. Jancar has said, in the current conditions and will go further to the extent that Eastern Europe follows the Hungarian direction of letting political pluralism develop, even though no one is going to let a multi-party system develop.

Well, the environmental concerns are going to be represented in that context.

Chairman HOYER. Essentially then, would I be correct? Dr. Jancar, what I hear you saying is that environmental movements will exist, because there is a deep concern among citizens about their environment and a growing understanding of the consequences of undermining the ecology.

Dr. Kramer, what you're saying is that the political atmosphere in which that is allowed to grow will vary.

Dr. KRAMER. Sure.

Chairman HOYER. I don't think, necessarily then that what I heard was necessarily contradictory. Dr. Lampe, I think that essentially you were sort of agreeing with both sides there.

Dr. LAMPE. Yes.

Chairman HOYER. Given that, do you find a parallelism between the political openness of the country, that is, Hungary which we perceive to be as well as Poland in a class different from, for example, the GDR and the type of environmental movements that are permitted?

Dr. LAMPE. Oh, I think so.

Dr. JANCAR. Well, I don't think we should forget East Germany.

Chairman HOYER. No, I mentioned GDR there.

Dr. JANCAR. The GDR appears to have quite a repressive regime, and one of the again intriguing developments, of course, has been the growth of the anti-nuclear movement, and from this has spawned an environmental movement under the aegis of the Evangelical Church. It appears to be quite—it's a pity Joan De Bardeleben isn't here, because she probably could give us chapter and verse on the size and extent of those groups which are engaged in environmental activity in East Germany.

Chairman HOYER. So the GDR may be an exception to that progression of openness and relationship to environmental movement?

Dr. LAMPE. Well, an exception only in one sense, because, yes, the regime is more severe and wants to be more severe, but on the other hand, here's the only country with a soul mate, West Germany nextdoor, speaking the same language, going through a full set of environmental debates and agonies in a much freer fashion, with that discourse coming into East German homes, except in Dresden, I guess, on television every night.

Chairman HOYER. Thank you. I've got a lot of other questions and unfortunately no more time, which I feel badly about. For those in the audience who heard 5 to 7 minutes, I want them to know and I want all of you to know that your full statements will be included in the record. I've looked at all of your statements. I was pleased with the scholarship and the depth that each one of your papers treated this issue. I think that we will find them very useful for the Congress. We intend to distribute them beyond the Commission to other committees that will find your analysis useful.

I want to again thank each of you on behalf of the Commission very, very much for the time that you took to be with us. Thank you.

Dr. LAMPE. Congressman, thank you.

[Whereupon, the Commission adjourned at 3:43 p.m.]

APPENDIX A

STATEMENT OF CONGRESSMAN STENY H. HOYER
CHAIRMAN, HELSINKI COMMISSION

THE POLITICS OF POLLUTION IN THE SOVIET UNION AND EASTERN EUROPE
(ON THE SECOND ANNIVERSARY OF THE CHERNOBYL DISASTER) —
APRIL 26, 1988

Ladies and Gentlemen, distinguished witnesses, fellow Commissioners. This day represents a Helsinki Commission milestone, for today, this second anniversary of tragedy at Chernobyl, we convene our first examination of a vitally important Basket II issue, the environment.

The Helsinki Final Act is explicit in expressing concern with the environment. Basket II contains language affirming the importance of protection and improvement of our environment, while outlining forms and methods of multilateral cooperation to further this end. The humanitarian provisions of the Final Act also have relevance here, for implicit in achieving our goal of a clean environment is the right of individuals to form associations voicing environmental concerns and freely disseminating information on the magnitude of environmental abuse.

It may not be possible to overstate the awesome responsibility we have of maintaining our finite environmental resources. Pollution knows no boundaries and environmental decay cannot be any one nation's problem nor should we act as if it is the problem of another generation.

The purpose of this hearing today is not to single out the Soviet Union and Eastern Europe for environmental scrutiny. The biosphere is universal and problems in this country, my own district and Western Europe deserve similar attention. The range of problems is unfortunately immense, so this hearing cannot be the Commission's sole examination. In turn, we need to examine multi-lateral and Western environmental problems. The CSCE review meeting in Vienna faces issues concerning the ozone layer, global climate change, acid rain, to name just a few of the considered proposals. To ignore the transboundary nature of pollution is to commit a most self-defeating policy error.

Chernobyl was a grim reminder of not only the costs of technological advancement but also that those costs can not be contained to one nation. We are not here to debate the merits of nuclear power, but rather the effects of ecological disaster on the political awareness of environmental issues. Part of the tragedy lies in official and public recognition of problems only after destruction has occurred. The global community has to come to grips with environmental issues before they become deadly. Scientists and environmentalists regularly produce chilling forecasts, sparking little debate and sometimes even less action.

The politics of pollution too often pit environmental concerns against economic interests, long-term ecological values against short-term profit, ecology against bureaucracy. In Eastern Europe and the Soviet Union environmental politics are limited by institutional barriers restricting public output and by economic hardships curbing governmental regulation and enforcement.

Our purpose today is not only to address environmental problems and policies, but to examine a new political awareness expanding the parameters of environmental debate in Eastern Europe and the Soviet Union. Perhaps increased activism reflects the seriousness of developments, but perhaps it also mirrors glasnost and greater official toleration of open debate. The unofficial environmental lobbies draw more than just political dissenters to their ranks. Scientists, academicians and even party officials voice concerns, adding new dimensions to concepts of political opposition.

APPENDIX B

STATEMENT
BY
SENATOR DENNIS DeCONCINI
HELSINKI COMMISSION HEARING
THE POLITICS OF POLLUTION IN
THE SOVIET UNION AND EASTERN EUROPE
APRIL 26, 1988

Mr. Chairman I would like to join you in welcoming our witnesses. I commend you for holding a hearing on this very important subject--environmental policies in the Warsaw Pact countries.

In his Letters from an American Farmer, St. John de Crevecouer (CRE VEH COOR) in the 18th century described the role which man's total environment plays in shaping his development. He said, "Men are like plants; the goodness and flavor of the fruit proceeds from the peculiar soil and exposition in which they grow. We are nothing but what we derive from the air we breathe, the climate we inhabit, the government we obey, the system of religion we profess, and the nature of our employment." This statement mirrors a key concept of the Helsinki accords which recognizes that the spiritual, civil and environmental aspects of an individual's existence are all pivotal and related components of man's right to a peaceful and secure life.

Today's hearing begins what I hope will be an on-going look at environmental problems among the Helsinki states and how our governments are responding to these problems. Although the Soviet Union and Eastern Europe are the focus of this hearing,

pollution is everyone's common denominator. The environment is the collective responsibility of all nations and all nations must share the blame for its destruction. We in the West have much still to answer for and the multi-lateral efforts of the Helsinki states are critical to the development of a responsible and effective global policy towards pollution.

Chernobyl tragically illustrated that the environment answers to no government and no political system. Pollution cannot be hidden or contained within a nation's boundaries. We will learn today about the state of the environment in the Soviet Union and Eastern Europe. We will also learn about the unique role which pollution is playing in awakening the citizens of these countries to the force of their public voice.

Through her great courage in the face of overwhelming criticism, Rachel Carson ignited a spark that effected fundamental changes in our government's response to pollution. Just as her voice became the echo of group after group of concerned Americans, environmental groups in the Warsaw Pact countries are beginning to emerge and, they are at least being tolerated in political systems which historically have not treated dissent kindly.

From Armenia to Krakow to the sulphur-saturated regions of Czechoslovakia, the terrifying magnitude of environmental damage can no longer be hidden. Citizens are beginning

to speak out against policies which are being held hostage to politics and economics at the expense of human life and nature itself. However, it will not be enough for governments to merely tolerate protest, committed and energetic actions are required now. The Helsinki process can play an important role in forging a common bond of cooperation among its signatory nations. It is a role which I hope the Helsinki Commission will actively encourage and participate in. I am looking forward to hearing today's witnesses. We must become educated about a crisis which affects us all.

APPENDIX C

SENATOR ALFONSE D'AMATO

OPENING STATEMENT

CSCE HEARING ON THE POLITICS OF POLLUTION

IN EASTERN EUROPE AND THE SOVIET UNION

MR. CHAIRMAN:

I COMMEND YOU AND OUR DISTINGUISHED CO-CHAIRMAN, SENATOR DECONCINI, FOR SCHEDULING TODAY'S HEARING ON THE IMPORTANT TOPIC OF THE POLITICS OF POLLUTION IN EASTERN EUROPE AND THE SOVIET UNION. THE EXPERT WITNESSES YOU HAVE ASSEMBLED TO SPEAK TO US TODAY ARE CERTAINLY SUPERBLY QUALIFIED TO DISCUSS THIS COMPLEX TOPIC.

ONE OF THE KEY INDICATORS OF THE LOWER LEVEL OF SOPHISTICATION AND EFFICIENCY OF SOVIET-MODEL ECONOMIES IS THEIR FAILURE TO DEAL WITH ENVIRONMENTAL PROTECTION ISSUES. WE HAVE LEARNED THAT THE ENVIRONMENTAL EFFECTS OF HUMAN ACTIVITIES ARE IMPORTANT TO OUR INDIVIDUAL HEALTH, TO OUR ECONOMIC HEALTH, TO OUR QUALITY OF LIFE, AND TO THE NATURE OF THE HERITAGE WE WILL LEAVE TO OUR CHILDREN.

IT IS A PRIORITY IN THE UNITED STATES AND IN OTHER DEVELOPED DEMOCRATIC COUNTRIES TO TAKE THESE ENVIRONMENTAL EFFECTS INTO ACCOUNT, TO PREVENT NEGATIVE IMPACTS, AND TO CORRECT PAST DAMAGE. WE CREATED THE ENVIRONMENTAL PROTECTION AGENCY AND HAVE INVESTED MANY BILLIONS OF DOLLARS TO CLEAN UP OUR AIR AND OUR WATER AND TO PROTECT OUR NATURAL RESOURCES.

EASTERN EUROPEAN AND SOVIET NEGLECT OF THESE MATTERS IS IN STARK CONTRAST TO THE ENVIRONMENTAL SENSITIVITIES OF OUR FRIENDS AND ALLIES IN WESTERN EUROPE. NOW, THERE ARE INDICATIONS THAT THE SOVIET UNION AND ITS WARSAW PACT ALLIES ARE AWAKENING TO THE NEED FOR EFFECTIVE ACTION.

THIS IS ONE AREA WERE EAST-WEST COOPERATION IS FULLY JUSTIFIED AND SHOULD BE PURSUED, IF AND WHEN PACT STATES DECIDE THEY ARE READY TO MAKE THE NECESSARY INVESTMENTS OF RESOURCES AND POLITICAL WILL TO ATTACK THE PROBLEM.

THE ISSUE OF COOPERATION ON THE ENVIRONMENT IS ADDRESSED IN THE HELSINKI FINAL ACT. IT IS UNDER DISCUSSION AT THE VIENNA CSCE REVIEW MEETING. IT IS A TOPIC THE COMMISSION SHOULD ADDRESS. THEREFORE, THIS HEARING IS A SIGNIFICANT STEP IN THAT DIRECTION.

I AM ANXIOUS TO HEAR THE COMMENTS OF OUR DISTINGUISHED WITNESSES. AGAIN, I APPRECIATE THE EFFORTS OF THE COMMISSION'S LEADERSHIP AND STAFF TO PUT TOGETHER THIS HEARING ON THIS CRITICAL ISSUE.

THANK YOU, MR. CHAIRMAN.

APPENDIX D

EAST EUROPEAN ENVIRONMENTAL PROBLEMS AND THE FRAMEWORK FOR PUBLIC POLICY

(Testimony for the Commission on Security and Cooperation in Europe, April 26, 1988)

John R. Lampe
Secretary, East European Program
The Wilson Center, Washington, D.C.

The increasingly serious set of environmental problems facing Eastern Europe was pressing enough to prompt my predecessor as program secretary, George Hoffman, to organize a workshop at the Wilson Center on this subject over two years ago. The meeting then took place just as the Soviet nuclear reactor at Chernobyl was wreaking havoc. The non-nuclear problems were well known even then: air pollution from vehicles and factories (especially metallurgical plant emissions) and from brown coal-burning electrical plants, which is causing lung disease, especially for children and older people, and killing forests; river and ground water pollution which has made water unsafe for human consumption in some villages and threatens even large cities; and chemical pollution from both industry and agriculture whichy makes the disposal of toxic wastes an issue that also must be faced. These problems are most serious in contiguous corners of Poland, Czechoslovakia and the DDR, but are real and growing worse to the south also. To the considerable extent that the increasing introduction of nuclear power with Soviet technology was part of the official strategy to deal with these problems,

the Chernobyl disaster dealt a serious blow to public confidence in "better science", in one area where Soviet technology was assumed to be world class, as a way out of obviously worsening circumstances.

My own trip to Eastern Europe last spring, in preparation for my program's full-scale conference on the region's environmental crises (June 15-16), made me aware of two truths: first, how acutely concious and anxious, indeed afraid, these problems have made the large, educated public, and second, how limited the framework for public policy and its leverage for enforcing the "ministerial-industrial complex" remains. In surveying the spectrum of East European countries, I ask you to note a number of national differences, each of them consistent with what we know about the way public policy is made in the particular country. I omit the DDR for lack of time and knowledge, and Romania because I find no willingness even to recognize the problems. In the others, one common feature has been the absence of a full-scale ministry for the environment, that is until Hungary established one this past January. But another is an expressed interest in greater knowledge of and cooperation with the American environmental establishment. Each of these four countries (Czechoslovakia, Poland, Hungary and Bulgaria) sent independent and impressive scholars to our June conference. (Their papers and those from Yugoslav, Austrian and Western experts will be published in a Wilson Center Perspectives volume before the end of this year).

Czechoslovakia

The small (550 employees) but supposedly prestigious State Committee on Science has designated one of its seven departments to deal with environmental protection. The department's 35 scientists are there on special assignment but work within a framework of bureaucratic control that gives large industrial polluters little cause for concern. This is as close as Czechoslovakia has come to an EPA, although plans for a separate agency have been formulated. At least the country's media are now more forthcoming about reporting environmental damage (e.g., all 250 oil spills in the Danube in 1986) The collection of technical data is reportedly good, although still closely held. Also, Czechoslovakia's formidable stock of frustrated human capital includes a large number of highly trained specialists in institutes and universities who have already done environmental research. Some of this cadre attended the workshop on agriculture and the environment jointly sponsored by our National Academy of Sciences and the Czech and Slovak counterparts in Ceske Budejovice in April 1987. I sat in and was impressed, as were a number of American scientists.

Poland

As noted in the excellent RFE Backround Report (no. 42, March 20, 1987) to which I referred the Commission, Poland's written regulations for environmental protection are the most

detailed and stringent in Eastern Europe. They are however most frequently observed in their breach. One large aluminum plant was actually closed some ten years ago, because of dangerous fluoride emissions, and others have been forced to limit their emissions since then, but the intitiatives came from unofficial, public pressure. The big metallurgical enterprises and power plants, the worst offenders, remain untouched by official admonitions, occasional modest fines, and even repeated public pressure. As a concesion to that pressure, the government several years ago appointed a leading independent scientist to a ministerial position with some environmental authority. His presence proved ineffective, however, and he has since been replaced. The necessary restrictions on enterprise behaviour remain expensive, and the shortage of new capital plus Soviet pressure for expanding the very metallurgical production which should be cut back do not promise rapid improvement, even if the present stalemate between state and society in Poland can be resolved.

Hungary

The National Office for the Protection of Nature and the Environment in Budapest was the closest that any East European country had come to an EPA organization until the new Ministry was created on January 1, with water protection added. Although its budget and staff (now over 100) are small and the stiff fines that they can impose typically covered by state

subsidies, the organization seems ably staffed from top to bottom. Its own publications and its collection of outside information are the most extensive in the region. Hungary's performance in appraising the environmental risks and high, presently unbudgeted protection costs to its already endangered water supply by the Gabcikovo-Nagymaros dam project on the Danube (jointly undertaken with Czechoslovakia and scheduled to begin operation in the early 1990s) has been impressive, although here a special inquiry by the Hungarian Academy of Sciences and public pressure deserve the credit. In response to growing concern about the disposal of chemical waste, some of which has been imported from Western Europe in return for hard currency, the then Office and the Hungarian Academy of Sciences joined in holding a major international conference on hazardous waste in Budapest last fall.

Bulgaria

The Bulgarian government has displayed a growing awareness of environmental dangers over the past decade and has permitted more media coverage of damage done since the Chernobyl accident (about which the press, like Czechoslovakia's, said nothing for 5-6 days). A state commission on the environment exists, with minimal powers, as does the more broadly based but entirely powerless All National Commission for the Protection of the Environment. The major change in recent years has been the introduction of the subject into school curricula, along a

pattern pioneered by the Soviet Union. Recent media attention to the serious impact on Ruse of chloride and sulfur pollution from a huge Romanian chemical plant across the Danube at Giurgiu neglected to note that in at least one demonstration in Ruse the demonstrators were objecting to Bulgarian as well as Romanian pollution. The growing Bulgarian reliance on nuclear power (32 percent of 1986 electricity generation, scheduled to reach 50 percent before 2000) has caused enough public anxiety since Chernobyl to prompt publicized certification for the Kozloduy reactors as safe. Yet with hydro-electric power trimmed to 6 percent of total generation since the 1983-85 and 1987 draughts, and brown coal-burning stations clearly heavy polluters, many Bulgarians believe that here, with Soviet nuclear power reactors as with other Soviet connections, they have nowhere else to turn.

Conclusion

The overriding problem facing environmental protection for all these countries is not the absence of appropriate legislation or even a powerful ministry. Nor, increasingly, is it the lack of accurate scientific data on the extent of the problem or public awareness that something more needs to be done very soon. It is rather that the apparatus of central planning and a command economy leaving the major polluters, the large state enterprises, free to draw on government subsidies to cover fines of any size without the fear of reduced profit margins that have made such penalties effective in the Western market economies.

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